represented by a specimen from Brandon Hill, exhibited by Mr. Howard, in his collection, No. 29. This stone is a conglomerate of a very dark red rust colour, consisting of red jasper pebbles imbedded in a highly ferruginous cement, and weighing 178 lbs. per cube foot. It seems improbable that this stone would successfully withstand the weather, if exposed in outdoor work. It would form, however, a most valuable material for concrete as a chemical union of great strength would take place between the lime and the ferruginous part of the stone, while, as the concrete would be buried, no danger need be apprehended from atmospheric influences. The stone from its great weight would also form an excellent material in foundations. The composition of the Brandon-hill stone is not everywhere of this ferruginous character. Some parts of the mass are highly crystalline, presenting the appearance of liver rock, and suggesting the idea of fusion, while other parts of it appear more laminated, and have more of the structure of ordinary sandstone. It seems to be generally without those strongly marked characters arising, in the north of England, from the presence of included fragments of quartz pebbles. Its colour is also generally red or dun colour derived from the oxide of iron, instead of those grey varieties observed in the northern millstone grits.

BUILDING STONES OF THE COAL MEASURES.

We now come to a series of arenaceous building stones and flag-stones, interstratified with beds of coal, shale, and other argillaceous deposits, and occupying in all our coal fields a higher position than the millstone grit. These arenaceous stones are usually grits of a finer grain than the millstone, although they all contain the same disintegrated elements of granite, namely, the quartz, felspar, and mica, arranged, however, and aggregated in a different manner from that which prevails in granite. In the gritstones of the coal fields the quartz is usually unaltered, the felspar always decomposed, and the mica in small plates. Besides this, the grains do not adhere by chemical crystallization, as in granite, but the grains of quartz are cemented together by an argillo-silicious cement, derived chiefly from the felspar in combination with quartz, arising from the attrition of the quartz grains, and the small specks or plates of mica interposed in greater or less quantity are supposed chiefly to produce the lamination or splitting tendency of the stone. When there is little mica present, the stone becomes a compact and solid freestone, and when the mica is abundant the stone passes into flag-stone, and becomes more or less fissile. This description of structure applies also to the millstone grit, except that the latter is composed of larger and coarser fragments of quartz, and appears to have been aggregated under somewhat different conditions, which it is unnecessary to enter upon at present. It may be observed that though the millstone grit has been described separately from the coal grits, yet there are sometimes amongst these, beds which can scarcely be distinguished from the true millstone grit, and which answer the same purpose of millstones, rollers for apple-mills, grindstones, &c. The resemblance of the millstone grit to some beds of the coal measures is sometimes so striking that it is difficult to distinguish them, and in describing specimens which are not named by the exhibitor I may possibly have included some of the coal sandstones with the millstone grits, or *vice versâ*; but no very great inconvenience can result from this, as the mineralogical character is so much alike.

The aggregate thickness of the sandstone beds in our coal fields is very considerable and very various, ranging from a few hundred to several thousand feet. Sometimes an immense mass of sandstones upwards of 2,000 feet in thickness occurs in the central part of the coal measures, separated only by a few thin beds of shale and coal as at Swansea, in the South Wales coal field. In the Bristol coal field, also, we have a mass of 1,800 feet, consisting of the upper sandstones and shales, succeeded by 1,700 feet of the central sandstones locally termed the Pennant grit, uninterrupted except by a few thin coal and shaly beds, whose aggregate thickness does not exceed 10 feet. The freestones among the arenaceous beds of the coal fields are used for ordinary building purposes, and many of them are so free from decided lamination that they may be carved, sloped, or bevelled at any angle without reference to the planes of deposition, but of course they should always be placed on their natural bed in buildings, an observation which applies to all sedimentary rocks. Where much mica exists, the rock becomes a laminated flag-stone, and is then chiefly used for forming pavements, steps, landings, foundations of buildings, gravestones, and similar purposes. Some varieties of the thicker beds of freestone are used for sinks, troughs, cisterns, filters, &c.*

SAINT PANCRAS ALMSHOUSES—COMPETITION.

Designs have been obtained by invitation from various architects for almshouses to accommodate 100 inmates, to be erected by a committee of this parish. The designs, about a dozen in number, are now hung in the Vestry-hall, Camden-town. We are not aware under what conditions they have been made, but there seems to be a considerable difference in the amount of accommodation given to each occupier by some of the designs beyond the others. In style they are nearly all Tudor, and all follow the received almshouse-type.

Mr. A. J. Baker has worked out his intentions fully, and gives two designs; one with fire-proof roof, flat; the second with wooden roof of high pitch. The entrances are at the back, the chimneys are thrown out in front, rising from the ground as at Wells.

Mr. W. J. Poulton's design has external stairs to the upper dwellings, and an arcade in front of the lower ones.

Mr. M. P. Manning's design (red brick and stone like the preceding and most of the others), has the committee-room with tower as an effective centre.

Mr. J. K. Colling has a similar arrangement in that part.

Mr. Legg has his houses in patches of six, connected by staircases. They are plain Tudor in style, and have a chapel in centre.

Mr. Webbe's plan is better than his elevation.

Mr. Granville's elevation is not so tasteful as might have been anticipated from him. He suggests a common kitchen for eight inmates.

Mr. J. F. Wood's plan involves more waste of room in passages than some of the others.

One creditable design is anonymous, and is marked *Industria*.

The decision will be made, we are informed, on Thursday 16th.

REALITY IN ARCHITECTURE—PRESENT POSITION.

THE ARCHITECTURAL ASSOCIATION.

The opening conversazione of the Architectural Association for the coming session took place on the evening of the 3rd inst., at Lyon's Inn, on which occasion there was a numerous attendance of members and their friends. Among other visitors was M. Horeau, of Paris, an architect of reputation, and whose design for the Exhibition Building was greatly distinguished in the first competition.

The President (Mr. J. D. Wyatt) delivered an address on "Reality in Architecture," in the course of which he said, the principal characteristic of society in the present age was evidently an onward impulse, a determined spirit of inquiry, which, though it might occasionally be misdirected, was nevertheless to be hailed as a harbinger of a better time. Time-honoured theories and ancient systems, many of them resulting from prejudice and caprice, and tending to no other end than the perpetuation of imperfection, had become subject to scrutinising inquiries, and received the impress of an approving seal only in that degree in which they were found to contain the truthful and the enduring. If we applied this test of reality to architecture, there was reason to fear that we should find it had not kept pace with the otherwise universal progress; nor were the causes of this either contempt of architects, want of material, or public indifference, but a sort of incapability which caused architects, as individuals, to set up petty standards of their own, in defiance to the universal laws of art, and whence it resulted that our structures were often meretricious in design, or utterly insipid as to character. Architecture, to be worthy of the name, must be essentially truthful, true in design, true in expression, true in construction. As to the first requisite, there should be nothing *merely* supplementary, for correct features would naturally result from correct treatment. It was a great test of an architect's skill, to observe how he succeeded in converting trifles and difficulties into sources of instruction and delight; and, above all things, it was his especial province to fashion the work of necessity into one of beauty, and extending the dominion of his intellect over subject matter, to stamp it with the impress of a reasoning and reflective mind. As to truth in expression, while the superstructure of a building was necessarily much regulated by the block form, yet, in its development, with the *constructive science* should be blended the *decorative art*. The term *expression* included the two ideas of (1) *adaptation*, *i. e.* the so disposing the accessories of a building as to make it eloquent of its purpose, as at Newgate and the Exhibition building; and (2) *proportion*, in which the outline and minute details, as in works of Jones and Vanbrugh, exhibited throughout a strict relationship and unity of idea. There was also a kind of expression dictated by climate and locality. Serene Greece was admirably suited for the exquisite ornamentation of her temples; but an atmosphere less favourable than hers, demanded those coarse features, that careful and marked profile which were to be observed in mediæval art. Admirable as was the Parthenon on the summit of the Acropolis, the marked outline of Westminster Abbey was equally appropriate in the neighbourhood of the Thames.

With respect to truth in construction, it was needless to observe propriety of arrangement and form in design, if we did not act in the same spirit as to the practical embodiment of our ideas. Attention in this matter tended to encourage a healthy tone of art in the profession itself. Counterfeit materials were to be denounced as utterly unworthy of us. The reader then brought pointedly forward the question of polychromy in materials, and urged the great importance of colour as a valuable adjunct to the architect's resources. Very successfully had it been attended to in the great churches of Italy, and in the use of brickwork in Northern Germany. What was desirable was consistent effect, not violent contrast, nor a gaudiness that resulted from a sort of infinite patchwork of all dissimilar and discordant elements. The study was, indeed, difficult; but no man need ever expect to be great, either in art or in anything else, who would not rather glory in the occurrence of difficulties for the sake of overcoming them, than beat a cowardly retreat into insignificancy, at the appearance of any obstacle whatever in his path. The chairman concluded by requesting the visitors present to honour the association with their observations.

On the conclusion of the chairman's address, Professor Donaldson rose and said, that, after the appeal and invitation made by the President to the seniors of the profession, he trusted he might be excused, if he trespassed upon the attention of the meeting for a few minutes. He thought that the members and visitors were much indebted for the address which they had just heard, for it contained many admirable abstract principles, much wholesome advice, and some valuable suggestions. But he hoped he might be pardoned, if he expressed the opinion, that the general tone of the address was too depreciatory of the present state of architecture. For his part he felt that the art was in a very hopeful condition, and he was the more impressed with this conviction from hearing the opinions of very many foreign architects, who had recently visited England, and were unreserved in their expressions of ad-

* To be continued.

For a comprehensive guide on OCR and PDF Compression visit ThePaperlessOffice.org